#550 - 631

Coll. 133 no. 5

notebook # 5

550
1819
May 23

Palma Christi seed resembles.

suppose Coccinella found on the grass length 3/10 Shells silvery and minutely punctured inner margin of the shells lined or edged with black with a long black line parallel to it on each elytra with several lengthened black dots or marks irregularly placed. near the shoulders base thorax black with a narrow whitish margin next the head and a broader one at each side. head black abdomen black brown — legs and antennae brown — in some specimens the dots are not so numerous and in others the thorax is entirely black & the dots blended together & the lines broader as in 564 presumed to be the same as this — the antennae of 550 are drawn rather too heavy

1819
May 1 —

The White Millers with the 4 rows of black dots & yellow spots on the body are (May 6) numerous — they lay a number of small bright yellow eggs. after 15 days the eggs are hatched. the young worms being of a pale yellowish color. & hairy —

1819
May 23

The buff colored Papilio with black bands. are now seen about ponds & marshy places. and are frequently found in numbers about wet spots in the road or in muddy alighting on its muddy shores

551.
1819
May 24

suppose Chrysomela legs of a dark yellowish red. 2/10 long — antennae, eyes legs & abdomen brown (▽) triangle black. thorax with two brown dots (rather indistinct). hind thighs formed for leaping.

May 30 1819 A dark cloudy day This morning I found about 1 inch long.
great numbers of the larvae of ~~the~~ Libellae attached
or resting on the rocks about 2 or 3 yards from the waters
edge: some had ~~were~~ just left that element. number of the
perfect insect were trying their feeble wings and in a few instances
they were seen just breaking from the shell of the larvae
it seems they come out of the water at a small distance from which they
to the ground or rocks in the course of a few hours
Libellulae attach themselves, like the larvae of Phryganea and upon the change
552 } to the perfect state. they were generally of one species.
357? } The thorax & face dark pale a ~~bright pale~~ yellow or cane colour.
(body black brown) with lateral yellow spots & an interupted yellow
line down the back; eyes olive brown, rather pale, wings
pale & transparent but somewhat of a dove colored tint
legs black brown — with 6 paler brown lines on the fore
segment of the thorax running from the insertion of the fore
wings to the neck — the eye spots in the wings is of a pale
lead or blue color. The male does not differ from the female
× in different specimens however in the male & female are alike in the markings except that the yellow spots on the upper
part of the abdomen are continued to the termination of it. ×
it is however about 1/4 of an inch longer, more slender in the
middle & broader near the end of the abdomen than the
female — the hinder wings of the male are excurvated —
instead of being rounded as in the female the male organ
is seated near the junction of the abdomen with the thorax whereas
in the female it is at the other end of the abdomen
length of the male 1 inch 8/10. length of the female 1 inch 6/10.

Libellulae among the number seen this day. the only different specie
553. is the one described below. it appear that these two species
live in the larva state in rivers (Susquehanna).
It is larger than the preceding species the male being 2 inches
long. & the female about 1/10 of an inch shorter — the thorax
& face in both sexes being of a very pale yellowish green
along the upper part of the abdomen it is annulated of a cane color.
with black brown narrow rings at the lower edge of each annulation, with lateral
brownish markings eyes olive colored, wings very transparent
with somewhat of a lead colored tinge, eye spots pale lead color.
paler than in the species above
legs pale greenish — the male is slimmer in the abdomen & broader
at the termination than the female hind wings of female rounded —
of male auriculated —

the wings of both the above species are resin colored near
the root

head thorax & shelly

553 5. Cerambyx — $\frac{5\frac{1}{2}}{10}$ long — of a lengthened shape brown punctured
(numerous
shelly with spots of greyish hair) — thorax legs & antennae slightly hairy (3)
1819 the 3d & 4th joint of the antennae have each a spine —
May 31 antennae nearly as long as the insect end of the shells bit out
& toothed ——

1819 had on the 3d & 4th
June 17 In one specimen found this day ~~only the 3 joint of the antennae~~
had a spine this was 6/10 long. ——

554 Buprestis ? $\frac{2\frac{1}{2}}{10}$ length color bister brown. — thorax head punctured
with short hairs
or roughened — shells with longitudinal interrupted deep indented
1819 lines — with rather ill defined yellow or cane colored spots —
May 1st — found on the flowers of the Dandelion —
May 1 id

$\frac{2\frac{1}{2}}{10}$ long.

536

1819. May 31

$\frac{4\frac{1}{2}}{10}$ long Color cherry red or ~~crimson~~ blood red — head very flat — eyes & antennae legs & tarsi dark brown — red swelled thighs — (with 2 knobs or rising on each side of the ~~outer~~ thorax and a minutely dentated margin under the glass) thorax with two longitudinal indentations or channels down the middle — shells flattened on the top and very finely punctated —

537

1819 May 31

$\frac{2\frac{1}{2}}{10}$ long

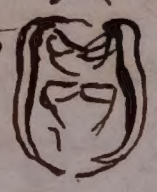
~~bug~~ 1/22 brown black with thorax & shells with a broad margin transparent & of the color of gold beater skin (abdomen black) legs pale (with 4 large gold figured spots on the shells — a small gold spot on each shoulder. and two minute gold dots on the black of the thorax the outer edge of the shells gilt ~~not~~ between the black & the transparent margin. — antennae pale, last joint dark — — (the yellow in the drawing should be gold) shells black punctured —

558 Hemerobius length rather more than 1 inch long. from the jaws
to the tips of wings of a bister brown color - under wings darker
1819. than the upper. antennae half as long as the wings -
May 31 wings with pale whitish or pale cane colored spots across the middle
of the upper wings and a spot near the upper edge of the tips
the lower wings with similar colored spots near the tips —
found a number about Hollenbacks dam - & sawmill —

lower wings purple black. ———
Some are very little over an inch others are 1. 4/10 the latter
June 7. the difference of size denotes it is believed the different sexes:
they are still many to be found about M Hollenbacks mill
& dam

559. Galerucа ♀ 3/10 long deep orange color. with 3 broad black
June 1. 1819. bands the middle one joined by the edges of the sutures of the
elytra being black - and with 2 black dots on the thorax
eyes, clove brown antennae, lower part of the shanks & the tarsi black —
interrupted triple lines on each elytron ——
In some specimens the middle black line is the broadest -
and the dots in the thorax very minute ——
a Variety supposed of this has the shells of the
color of Galeruca Cucumeris viz a pale yellow or gamboge
yellow but in every other respect resembles this species

560
June 1819

2/10 long – cinnamon red shells & thorax finely punctated antennæ eyes & tarsi brown. shells bending under.
thus  color red ochre.

561
June 1819

Elater rather more than 3/10 long clove brown. thorax considerably broader than shells rounded. shells rather roughened & long-ish. somewhat finely downy – antennæ not serrated

1819
June 2 found Cicindela male and female in coitus on a dead rotten log. the two sexes of this species differ but little they are both marked with three whitish spots on the margin of the elytra the smallest supposed the male? is more of a blue green than the other. very active insect readily use their wings —

June 2. 1819 found. Elater (the black smooth polished) on the wing in the middle of the day —

1819 June 1 The larva of Melolontha 8 punctata live in dung dug up many of them this spring in my hot bed. — white short or thick

June 3 Elater Oculatus — was caught —

562 1819 June 3 Buprestis near 5/10 long. thorax elytra of a metallic brown (purple brown) or bronze inclining to purple irregular channels toward the edges of the broad elytra and punctated upper part of the abdomen metallic green underside of abdomen somewhat bell metal color. inclining to purple

563 1819 June 5. Chrysomela? near 4/10 long. it leaps — ~~this is~~ a red or (red ochre) ~~thorax~~ head & thighs are of a yellowish red thorax red & yellowish headed. ~~body~~ marked with two brown dots — neck eyes antennae & tarsi brown shells smooth & cane colored — with brown black longitudinal broad lines or bands formed by the margin of suture & a black line near the margin (5 lined Chrysomela?) taken on the wing. thighs broad & flat — inner half of shanks brown outer amber or gum arabic color

564 1819 June 5 Coccinella? species as 550 — with black figures and ~~brown~~ or light brown — long I presume to be the same head & thorax black shells silvery dots. ~~down~~ & legs. & antennae abdomen black brown —

1819 June 6 Met with Coccinella No. 147. in coitu the male & female are alike in the markings or number & form of spots the smallest of the two was of a brighter red. ~~this~~ this species is of a longer form than the other species ~~this tribe~~ the larva is figured No 437 & is generally found on wild cotton or ~~milk~~ weed — they laid 5 yellowish eggs near 1/12 long — from these proceed the larvae which are when full grown 1/10

565
1819
June 6

near $\frac{2}{10}$ long, color brown or chesnut brown — antennae clove brown 2/3 ♀.
as long as the mixed shells marked with two white dots near the middle & with a lunule or
transverse bar or spot of a grey or whitish color; the
hinge grey white

566
1819
June 6

♂ chesnut brown $\frac{6}{10}$ long — thorax abdomen & legs yellowish
brown — wing black brown with a resinous lustre — eyes
brown antennae black brown —— abdomen formed like
the ichneumon but not flatened at the side curved
flat and rounded on the back channeled underneath ——

567.
1819
June 4
nat size

Moth 7/10 long of an ash grey color.
upper wings with a slight tint of olive brown — with
numerous fine dark lines or nerves — wings somewhat ridged
— when at rest

568.
1819
June 4
nat size

1 inch & 1/10 long
Miller.
color white upper surface of superior wings with
black dots particularly along the outer rib. antennae
black (female specimen) thighs and breast dark ochre
yellow (chrome yellow) flanks stain alternate black
and white abdomen with lateral broad band of white
last segment white. back or upper and under surface
deep ochre yellow. with 3 rows of black dots (or 15 dots)
on the under surface and 3. rows of larger black dots.
on the upper surface 21 dots under surface of superior
wings dark yellow. upper & under surface of the lower
or inferior wings dark yellow. with 3 black spots
placed in a triangle — larva found about cabbages
late in the fall. laing. the perfect insect makes its
appearan late in May or the beginni of June —

569
1819.
June 16.
Nat size

supposed a butterfly — flies by day — wings about twice the length of body length of upper wings 6/10. Color blue or purple black the rib of superior wings half way from it root ochre yellow (it is too bright a yellow in the drawing).

570.
1819.
June 1.

The Phalaena of figure 420. came out this day it was a female — and proved to be the "Wild Silk worm" it layed eggs each of the size of very round or very slight.

laid eggs
July 7.

oval & color of the larva is a very general feeder on the apple rose hazle currant &c &c. The male is about the same size as the female but its colors are a shade deeper the bands of the annulations of the body are dark cinnamon color. in the female there is some black — the male is easily distinguished by its very broad feathery antennae —— about 10 days the eggs

18.
Egg hatched

were hatched the young came out of the eggs kidney shaped spots ——

571.
1819.
June 7.
Nat size

Asilus ? near 7/10 long eyes green with a tinge of brown thorax marked grey with two longitudinal black lines and two black blurred dots or spots on each side of the lines 4 first abdominal segments grey with black brown & glossy beneath — rest grey backs slender — abdomen long and tapering to nearly a point — tips of the wings slightly clouded — shanks brown yellow. thighs & tarsi black brown; shanks thighs & tarsi dark brown with long spines abdomen projects considerably beyond the wings — This specimen when caught had a tipula in its embrace as large as itself and was piercing it with its sucker

572.
1819.
May 20.
June 8.

Larva of $\frac{5}{10}$ to $\frac{6}{10}$. full grown long. body compos
of 12 annulations besides the head on the last annulation
there are two horns or hook leaning over the anus —
color pale brown the upper half of each annulation
a dark brown band across — feet six — with tuft
of brown hair of irregular length under part of the
body pale This insect is the pest of Insect Collect
if the Cabinet is not every day examined it is soon destroy
though they principally attack the fresh specimens —
Camphor will not keep them away ——
They change their skins several times in the larva state

572.
1819.
June 7
Nat size

$\frac{6}{10}$ length of a grub. Color grey with a slightly raised
bleeded - flesh colored shelly edge
longitudinal bars (3 on the upper part of each shell)
with dark spots on the bars. shelly arched rounded and
and abruptly bent near the tips which are then
suddenly narrowed and somewhat extended the ▽ at
the suture is color — head formed like a hawk
or sheep. — Color somewhat of a lilaceous tint
eyes brown small —

1819 June 7. The Phalaena. ~~was~~ pale green with long wing tails was this day sent to me. it was a female the male is supposed ~~to be~~ of a bluer color ~~was~~ this day sent to me after laying a number of dark or clove brown brown round eggs it escaped — eggs laid June 7. In about 10 days the young came out of the eggs — eggs hatched 18

1819 June 7 this day the first time this year saw several empty grubs larvae of the Cicada Pini supposed adhering to the body & lower limbs of the White pines & heard their note supposed)

1819 June 1 Saw Papilio of the Hop. & of the Milk weed for the first time this year —

1819. June 2 Saw Phalaena with the Peacock eyes —

1819 June 4 The Sphinx No. the eggs of this are of a ~~very~~ pale transparent green are frequently seen in the evening about the flowers of the Honeysuckle (Lonicera) — also the small sphinx with the ~~snow~~ silver white spots in the wings (No.)

575 1819 June 8 Supposed a Cerambyx thorax legs gamboge yellow. head antennae & shells 5/10 long grey brown or Rebecca's hair color. two dark brown spots or dots on the thorax upper part of the shells next the thorax yellow — abdominal segments yellow with a dark spot on each side of thorax in the middle of abdomen underneath and at the anus — found on the lilac bush — antennae length of the shells — insect of equal width. parallelopiped

576
1819
June 9

& later not quite $\frac{4}{10}$ long) — broader across the thorax than the thorax and antennae brown black. shells pale umber color longitudinally furrowed or punctured — with a small spot or lunule on each side of the suture near the leg brown — abdomen dark brown.

577.
1819
June 9
Satrap.

Coccinnella $\frac{3\frac{1}{2}}{10}$ long. This is a very superb
me. of the largest species
species, head & thorax black shells color of
morrocco leather. with a broad black marginated
suture; black figures & dots each surrounded with silver
edging — with red brown antennae & legs. abdomen black brown
with rosy or crimson wing

578 Libellulae. 1 3/4 inch long. wings folded ~~ex~~ vertically
1849 when at rest — wings brown black — with a whitish spot
June 11 near the tip of each wing head & neck a brilliant metallic ~~brownish~~
green — eyes dark brown & glossy. thorax & abdomen brown
black with a play of green. sides of the thorax metallic
green legs black — the under parts of the thighs & shanks
with fine hairs or spines — found in the woods near rivers

579 Libellulae. 3 3/4 from tip to tip or from the head to
1849 anus 2 1/4 inches long face yellowish. eyes olive brown
June 11 thorax bister brown. with 2 bright yellow lateral bands.
front of thorax light brown — abdomen dark bister brown — with
a lateral interrupted yellow line on each side — wings
with bister brown arms & clouds or large spots —
frequents ditches generally in company with another species
with a broad white (back of abdomen) and clouded wings —
perhaps a different sex?

580.
1819
~~July 11~~
June 11
Hemerobius
Pectinatus.

Hemerobius 1½ inch long antennae pectinated or like those of a female ~~male~~ Phalaena. Stemmata very distinct eyes brown general color of thorax abdomen. legs. & wings nutmeg brown both under & upper wings of the same color each with a broad white bar across the middle in which there are several brown dots — near the tips at the outer edge there is a long white spot with a few white dots — the back part of the head. is a brownish yellow. — found in Shickshinny narrows —

1819
June 11. I found on a Sasafras tree near Shickshinny several cocoons of a ~~brownish~~ grey paper somewhat of the figure of a cone. or sugar loaf 1½ inches long & attached by a very strong foot stalk to the limbs — on cutting into them I found the inner cover of a brown color and of a very close textured the insect had come out but appeared to be a Phalena the male smaller than the female with very broad antennae — what species ask Oppell? Ichneumon? the one of them was destroyed by cavity was perfectly filled up with these cocoons. but they were all out —

rare in Luzerne

1819.
June 11 Found on the body of an oak tree a male Phalena of a yellow color the under wings marked like some Query — Is this the male ~~of~~ tailed

June 11 Found on the stones Brooks larvae supposed to be Ephemera —

1819
June 12
582 Found a small nest of the Hornet — these was but a solitary Hornet female? ~~had no sting~~ has a sting. It was found under a projection of a Shistose rock — and was composed of 3 concentric balls or bladders each unconnected with the other except at the upper part where it was joined to the rock — at the bottom there was an aperture just large enough to admit the hornet opposite to which there was a similar aperture in each of the interior bladders from the top of the interior there was suspended a comb composed of cells. each of which had a maggot. or larva not closed up. It appears they are waited on here by the mother & fed? —

solitary? a species?

almost figured.

July 4 female wasp. white. attends on the larva one half the cells closed up the rest today

This ~~hornet~~ is a strong powerful insect armed with a sting that creates excessive pain. they generally form large nests usually of the size of a bonnet hat and live together in large numbers the ~~nests~~ having 3, 4 or more combs — it is about 9/10 of an inch long. of a sooty black with dark brown eyes — with pale cane colored ~~marking of the~~ face jaws, cheeks, with similar colored marking on half of the front thighs, fore shanks transverse lines on the thorax & 4 lunules on each side back of the thorax, a lateral spot on the 3d annulation the 4 & 5 annulations cane colored with each 2 black dots the last annulation with 2 cane colored spots — the last 4 annulations have each underneath ~~the~~ lateral cane color spots 6 of which have each a black dot in the middle of each spot —

1819
June 14 Found several of the men. ½ inch long Buprestis — on the bark of a felled white oak the abdomen is a brilliant green beneath the elytra and of a coppery tint under the abdomen —

581.
1819
June 12

Fly 6/10 Bombylius ?. long caught on the ground — resembles a bee. thorax & fore part of the abdomen covered with yellow hair like the bumble bee, eyes dark brown snout very prominent & covered with yellow hair antennae plumose — abdomen on black fore part covered with yellow hairs hind part with fawny or yellow red hairs — wings with a cloud in the middle near the outer nerve a dot in the outer nerve. legs black brown —

583.
1819.
June 15

(when stretched out 6½ long). head thorax & legs bister brown abdomen situate at the end two long straight narrow joints and and its position nearly at right angles with the two first joints the abdominal next the yellow red. & red ochre the other black brown — in the wood) and hovering over roads & paths — face metallic white or silvery —

584 Libellulae) 1 2/10 long of a fine ultramarine sky blue brilliant or
1819 smalter blue — marked with 3 black lines on the thorax
July 15 upper part of the head black with 2 blue spots — with black
June 15 wings on cast abdominal segment — body long & slender.
send ~~two~~ smells ~~slight~~ a little into a club — frequents
stagnant pools — rests on the reed & grass its body level
to the horizon & its wings along the back when at rest —
it is of an exquisitely delicate brilliant blue — the nerves or
wire work of its wings is very open

585 Bombylius ? near 3/10 long — black with a lateral black
1819 trunk anus with a white tuft — eyes brown and occupying the
July 14 June 15 whole head with a white face or tuft at the mouth — wings half
rest the body black. frequents paths in the wood) ——

586
1819
June 16

Cicada 2 1/3 / 10. long brown with a greyish ash band across near the end of the point of the shell with a grey spot on the side of the shell and somewhat greyish about the front of head with a dark brown cloud across the tips of the wings ——

587
1819
June 17.

Cerambyx - rather more than 3/10 — long nutmeg brown — sides of the thorax and base of the ashey grey with an ash grey figure on the outer margin of the shell. and curved towards the suture — with dark dots or spots on the shells —— legs alternate grey and brown. or ringed — antennae 1/3 longer than the insect —— thighs very much swelled ——

588
1819
June 17

Cerambyx nearly 5/10 long thorax with a short lateral spine is long & shells nearly one third shorter than the body which tapers much antennae twice the length of the insect — general color of the insect black brown dotted and mottled with grey 3 indistinctly defined bars runs from the outer edge transversly down toward the suture the small end of the joints of the antennae grey ——

589 1819 June 17 Graphic Cerambyx

Cerambyx 6/10 — long general color black brown with grey marks below each other somewhat like greek letters and with 4 small grey marks on the inner edge of the tips — a large oval or round black spot on the thorax and a small dark spot on each side — antennae as long or nearly so as the insect —

590 1819 June 17

nearly 5/10 —
Cerambyx long. It has a longitudinal stripe of orange yellow ~~outer margin of the shells~~ clove brown — and sides of the shells and thorax and head orange yellow — antennae nearly the length of the insect or nearly reaching to the tips of the shells — shells of equal width the whole way.
~~It has~~ It has 2 dark dots on each side of the thorax — head thorax & shells punctulated —

591 1819 June 18 came out this day

body 1 inch long.
Phalena male tip to tip 2/4 long. Color of the Insect Brownish orange with Cinnamon brown slightly violet upper & lower wings; a round white spot in the upper wing — this was the male. the antennae of which are only pectinated or feathered 2/3 of their length from the head — The larva is figured No. and is the yellow caterpillar with black stripes down the back so common in clusters last year on the oak

Phalena Quercus? see Donovan B I Vol 3 plate 104

The female is rather lighter colored than the male is larger being 2 3/4 inches between the tips has the same white spot in the fore wings the wings are not not of the purple brown color of the male their general color being flesh color deep ochre yellow with a very slight tinge of brown the upper wing have a line running from the tips across the wing from which to the outer edge or base it is of a pale cinnamon color the lower wing have also a pale red line running through them — the upper wings are peppered with dark olive specks — thorax and abdomen

see description female Bark Sphinges & Phalenae

592 Cicada $\frac{3}{10}$. long color dark bistes shining brown
June 18 1819 with a lemon yellow band, paler, from the top of the
shell towards the anus. and two transparent spots on
knight soldiers from the height of his cap. the ridge of the shells behind the yellow band — a dark
brown spot on the tip of the wings nerves pretty strong
marked — a few yellow dotts above the eyes —

593 Caterpillar. 2 inches long. supposed the kind so numerous
June 19 1819 on the Lombardy poplar at Sintons destroyed by Phoebe
they hide themselves several times — the general
20 color of the larvae is black covered with minute short grey
in chrysalis hairs — it has 6 stout spines one each annulation of the
body except those on which the real feet are situated which
have only 4 on them — these large spines have small ones
attached to them — the supporters are yellow brown & those
on a yellow brown spot on the back of 4 of the annulation
It does not spin a web but on a sheet or few threads
attached to the spot from which it suspends itself like
the papilios, of the thistle & milk weed — in 20 hours
from the time it so attaches itself it changes to a chrysalis
and in 15 days comes out a most superb insect the perfect insect

July 5 came out a butterfly

594
1819
June 20
Lent by
Effie Miller
Phalena
Comet
Peacock
June.

Phalena from tip 3½ inches long This is
female.
a superb insect the female has the thorax and upper
surface
of superior wings of a rich dark cinnamon brown. with
a dark in the middle of the wing near outer nerve
composed of a series of lunules or a waved line
with a line across the wing and another
less distinctly defined pale curved line near the outer margin
the upper surface of the under wings has a large oval
(in some specimen circular) spot well defined by a stout
black outline the inner ground of the spot being metalic blue
with a white comet in the center — ~~around~~ this eye like
spot is surrounded with a ground of bright cromic yellow.
~~t~~ the base there is a semicircular black line and below.
it another broader. red or reddish brown band or line —
antennæ very narrow — abdomen ~~brown~~ ochre yellow with red on
the upper part of the annulations on the back — they differ a little
in different specimen of the same sex some being darker.
on the thorax and ~~rest~~ on the wings near the thorax
and vary somewhat in the size form & brightness of the tints of
the upper wings & upper back
The supposed male of this is not more than 2 3/4 inches
between the tips and resembles the female in the color.
and markings of the under wings but the upper wings are
of a dead or chromic yellow color. with a dark red brown
short bar. from the rib ⅓ way across. & a similar colored
dark spot or bar. near the tip — antennæ thorax & body
yellow — found July 11 on an oak tree body near Shickshinny

595
1819
June 21
Coccinella 1 3/4 / 10. long head black with two small white dots
between the eyes black figured thorax with white margin
shells deep orange inclining to ~~red~~ reddish brown — with a chain shot like
black figure on each elytra in the middle near the sutures —
being composed of a large & small dott connected together by a dash
color of the shells dark ochre red — abdomen black —

596
1819
June 21 Co cinnella $\frac{2}{10}$. long shells orange or deep ochre or terra sienna yellow. marked with minute darkish spots
thorax black figured with a yellow margin —
abdomen black

1819
June 27. found the smooth black polished Elates 9/10 long

June 27 several of the steel blue wasps (masons) came out to day —

1819
June 26 Mr Sidney Tracy gave me a large Sphinx which he
597. had caught it is 4 3/4 inches ~~below~~ from tip ~~to tip~~. and
Sphinx the body 2 1/8 inches long. probably a male the antennae are
nearly one inch long. eyes brown its general color
is a blueish grey. with 3 ═ black lines on the
fore wings and a dark or black cloud at the base of
the inferior wings its sucker is divided near the root
and ~~it~~ is 2 inches long when sucking the nectar of flowers
at other times its is rolled under neath like a watch spring
it has lateral distinctly marked spots on the abdomen

598
1819
June 7.

Sphinx 1½ in length — 3½ inches between the tips — eyes brown antennae whitish. Color ash grey or iron grey dark with 2 one barbed black lines on the fore wings — a black cloud at the base of the under wings and next above it — (next to the root of the upper and lower wings it is pale grey or whitish (thorax dark.) the head in front with a lateral whitish spot on each side before the eyes — abdomen with interrupted black bands — and a line down the middle of the back — eggs green — see back June 7. common in the early part of the month of June about Honeysuckle flowers in the dusk of the evening —

599
1819
July 27

Papilio outer margin of wings between near tips, 2½ inches long wings black. under surface of upper & lower wings with a row of dark orange or iron rust colored spots. with several large spots of same color. near the root of wings — with a row of cane colored lunules near the outer. with a triple inner row of similar colored spots round: square & triangular forms. and a few spots of the same color near the root of wings. abdomen with 5 rows of minute cane colored spots. the under part of the abdomen has a lateral row of iron rust colored spots with an other row of minute cane colored spots immediate under the belly. antennae 2/3. length of insect black and abruptly clubbed dusky orange. thorax like feelers and legs iron rust color. it has similar markings on the upper side of the wings but there are neither rusty nor cane colored spots near the root of the wings length of insect 8/10 long — found about cow dung.

600 Larva of Coccinella — yellow shells with 9 black spots —
1819 July 1 — 4/10 — long.
head & thorax pale yellow. body composed of 11 blueish lead colored annulations which are pustulated & short spiny the third & sixth annulation from the thorax have each a lateral orange spot on each side — thorax is figured. — when ready for transformation it attaches itself by July 4 changed from larva to pupa a leaf or plant and remains motionless for 24 hours when being prepared for the change it exerts itself to cast off the larva coat which bursts on the back the pupa appears. of a pale yellow or waxy appearance

July 11 cast out perfect insect

Counted the eggs in the body of the female with silk worm & found 335 the whole body but a mass of eggs. few of them arrive at maturity — but become the prey of birds or insects — so that only sufficient survive to propagate the species — I have seldom met with more than two or three cocoons in a year —

1819 July 1 Found several small Coccinella black brown with yellow spots on the stalk of the Holy oak —

1819 July 1 The pale Gambege papilio with a black border on the outer margin of upper & lower wings now appear in numbers.

July 1 Found several pale brilliant sap green caterpillars with alternate black & chromic yellow or orange spots. on Smellage they were when full grown two inches in length — the black spots are of a deep velvet black but the yellow vary from pale yellow to deep orange —

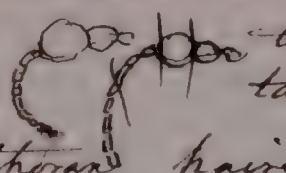
601 see 601 below.

1826 July 27. one went into pupa this day. which was found on the cicuta pupa a pale colored. with a dark shaded line on each side of abdomen and dark shade in front down the edge of thorax rudiments —

1819 July 1 Found several Meteorinthæ on the under side of the leaves of the fox grape — they eat the leaves (vine pullers) they are 3 2/10 long and broadest towards the tips pale yellow brown dark brown legs and dark brown line along the sutures and broader dark line on outer margin of shells — fore half of thorax abdomen dark brown — hind half pale brown — thorax blueish brown spots — wings brownish black —

Found on Smellage 601 a

the small larvæ were found on the wild plantago on the flats —

602 1819 July 3 — one 1/2/10 long. thorax and shells ochre red — with four black brown very large spots covering the shells so as to leave a red cross on the elytra eyes antennae legs dark brown — the 2 and 3 joints of the antennae from the head pale yellowish red & uncommonly large particularly the 3d — the rest brown and of uniform size — an active insect  tarsi 4 joints the claw joint long shells & thorax hairy — legs & abdomen beiter brown

603. 1819 July 3 — Cerambyx rather more than 1 inch long. Antennae as long as 9/10. or somewhat longer than the shells — general color dove color — with two round dull yellow ochre spots in the center of each elytra with streaks of the same color near the shoulders & tips — head dull ochre yellow — eyes dark brown thorax with 3 dull ochre yellow longitudinal bars — with 2 dark small lateral dots — sides of shoulders of the elytra with a black spot — thorax & elytra covered with minute black spots antennae pale at the 10 joints & inserted in a pale spot in the eyes there are 11 joints but the second is so short that there appear but 10 joints side & under part of abdomen dove colored with ochres thighs legs tarsi & antennae pale dove color — tips pointed

604
1819
July 3

Phalaena
Devastator ?

Larva of. (Corn Cutworm) One inch & 1/2 long. 6 black brown feet 8 & 2 anus supporters color purple with a narrow cane colored longitudinal stripe down the back and a stripe on each side on the 3 8 9 10 & 11 annulations the 4 middle ones being destitute of the lateral stripe ~~over the~~ on the back of the 1 & 2 annulet and over the anus it is dirty gum color — they cause great destruction among the Corn cutting off the plant square off and generally making a lodgment in the stalk — in their movements they somewhat resemble the Geometra the space between the supporters and the real feet being arched when moving — This insect lives in the heart or pith of the stalk —

1819
July 4

The black brown Coccinella with 10 yellow spots on the shells are now numerous on the milk weed they are a small species — the margin of the thorax in front is yellow. this yellow color varies in specimens from a Lemon to a deep orange color — difference of colored spots perhaps indicative of sex — as two found in coitu the one that was largest had orange spots the other smaller & pale spots.

1819
July 10

The Papilio of the Milkweed are now in coitu found two this day so.

1819
July 10.

The Papilio yellow brown with silvered spots are this day also in coitu —

July 9.

Three papilio of the milkweed went into pupa pupa of. a pale bluish green with an interrupted gold line on the back of the abdomen above which is an interrupted black line or row of black dots there are also several gold dots in front & back about the head. and a gold dot on the middle of the rib of the upper wing — the foot stalk is black it spin a few strayling threads of silk to which the pupa is attached by the anus (those that undergo transformation in the summer are 9 days in chrysalis — those which remain during winter how long?

609.

July 18 all came out brilliant orange

July 6

The Papilio purple brown wing with a broad yellow band a splendid insect with azure or smalts blue spots is this day very common —

605 Sesia. 1 inch 3/16 long. this species somewhat resembles
July 4 when on the wing a large bumble bee. is of a brown black color.
— on the thorax — on the face (or between the eyes in front) on
the cheeks underneath. there are long yellow hairs which
on the thorax terminate square and abruptly — is broader on
the thorax and across the abdomen than the insect of this
class genera generally are. and is a powerful & rapacious
insect prey is without mercy on other insects the one figured
had his rostrum inserted in a large crimen when caught ~~& flew off with it~~

606 Cerambyx.
July 6 Shells. ~~black~~ brown. black. with a greenish tinge — thorax & shells rough & finely pubulated
antennae & legs dark brown thighs very much swelled. but slender
the body. shells indented at the thorax —

607
July 8. Crimen. 4½. long. Crimson color. with large black spots.
found. generally on the orange Yellow Milk weed. with narrow leaves having underneath
stem hot milky — (saw also Cerambyx Furnator on this plant: C. Tomatoo
now copulating —

smallest supposed the male. 4 1/2 cm. largest supposed female. 5/10. —

July 13 Numerous Cerambyx Furnator now in coitu —
July 15 Caught a fine Papilio. purple brown yellow border & blue spots —
July 18 Found Gallerua 12 punctata greenish yellow with 12 dark
brown spots head black
Found Humming bird Sphinx about Larkspur.

July 23 Cerambyx Cylindricus numerous now or very common

1817
Aug 4 Received Larva of the Solatac worm same as figured at 429 except that the rings were covered with rows of minute white dots on the back.

Aug 8
went into pupa

Sep. 8
came out

1819
Aug 5
609. Found a brood of three caterpillars scattered over a young (yellow pine sapling about 10 feet high) on taking them in my hand they left considerable turpentine on them — they had eaten all the leaves off it I brought them all home and in the course of a day or two they all spun in attaching their little pale salmon colored cocoon not quite ½ inch long very fast to the limb or body of the tree the cocoon soon turns of a darker color approaching to brown The ~~Latter~~ larva when full grown is near 8/10 of an inch long of a pale somewhat reddish yellow. the head darker with a black dot on each side of the head. it has 6 rows of dark brown or black dots of 11 in each row.— over the vent is a large dark brown spot

Sep 3. Several of the perfect insect came out.
they remain about 4 weeks in the pupa state or one month —

610. Aug 5 1819.
remarkable for a flesh colored band between the real & false feet
Larva of length when extended 2/4 inch
generall color a somewhat purple brown from the flesh colored band to the vent from the flesh colord band to the head an olive green approaching to brown — with a lateral row of minute pale yellow dots and two lateral rows of dark bluish dots above the yellow dots — The annulations of the third real foot from the head has a pale yellow irregular eye like spot on each side in the middle of which is a pale blue spot surrounded by a black oval ring — the next annulation back of this has 4 pale blue dots and the base of this annulation is of a high flesh color like a ring on the body. between this and the next annulation it is black or very dark brown. The supporters or false feet have a tinge of blue and over the anus or vent is a pale blue spot. The real feet are pale flesh color. it is active in its movements but frequently stops & short and drawing in its head makes several sudden jerks as if coughing. On one occasion when suddenly handled it protruded, (I think?) a pair of reddish horns or feelers. Its food is unknown to me being the only one I ever met with — it was crawling on Linton's steps It refused every kind of herb that was offered to it and a few hours after it received it it began to spin a few thread was given to me and after attached itself by the vent with a thread from each side and underwent its change to a chrysalis

changed to chrysalis Aug 6

610 Continued from the other side

. The pupa resembles in form that of the femel worm or the insect on the Wild parsnip Cicuta Smellage & plants of this Genus. —— It is of a flesh color with a brown blaze or broad band the length of the back and a lateral blaze of the same color. along the lateral blaze are ill defined spots of a bright green — It is near 1½ inch in length ——

came out May 27. 1820 — It is nearly 10 months in the pupa state during the time it is in the pupa state it exhibits more or less of a pendulous motion, and more life than generally shewn by insects in that stage of their existance —

611 · Larva of. Wild Silkworm

aug 5 1819 This is a variety of 420. being of a sap green color paler or of a whitish green on the back It is when full grown 4 inches long and 2¼ to 2½ in circumference the six thorny knobs or crowns in front are all of a yellow color but like 420 - it has the double row of yellow tits like protuberances on the back and two lateral rows of blue tits on each side. the inner part of the suppanes is blue — It was found on the common currant this insect appears to be a very general feeder and probably the difference of food may account for the ~~variety~~ difference of ~~it~~ size & color. in specimens ~~—~~

aug 7 Spun a cocoon web. as large as a goose egg of a white silk which in a few days begin to turn salmon color & at length become brown

2 days occupied in spinning.

came out the latter end of June 1820 a female of

612
aug 10.
1819.

Dytiscus ? or Hydrophilus ? This insect was caught in the dusk of the evening twilight on the wing to & and the Susquehannah River — it is an active nimble insect & flies with great quickness when approached — It is like the rest of this Genus highly polished — the fore feet have next to the shank a Cup formed of a number of sup. it is admirably constructed for the element in which it lives and moves with the utmost ease & velocity on the surface of the waters when disturbed it can dive in an instant out of sight

613
1819.
aug 28

given to me by J B Overton found near oak-bench

length 2 3/4 inches slim built antennae yellow red · 3/4. the length of the insect abdomen with a forked appendage olive brown body green brown — middle & hinder thighs olive brown and annulated with pale rings · fore thighs green all the shanks green tarsi 5 joints pale yellow brown middle thighs thickest — fore slimmest —
(same day Mr Hentz obtained a specimen) —

514 Larva of Sphinx ——— general color dove
Sep 1 the three first annulations next the head pale. with 3 inches long brown.
1819 2 large oval dark brown spot lateral covering the upper part
of the 2 & 3 annulets - pale transverse lines
and 8 lateral dots the spine short & much bent
went over the anus its food not known to me
int pupa
middle
Septemb

615. Spider.. 5 or 6/10 long thorax and upper surface of
the abdomen of a pearly ~~or~~ white & ~~or~~ silvery lustre with 12.
Sep 11. or more black lines across the upper part or back of the abdomen
1819. the space between several of which is filled up with a shorter yellow
legs black & without spines discernable to the naked eye -
under part of the abdomen black with 2 large yellow spot near
lines & dots
assembly marks of exclamation !!
the pair of legs next the hind ones much the shortest —
abdomen egg formed slightly compressed
feelers pale yellow
The forepart of the upper part of the abdomen as well as
the thorax is of a silvery or pearly lustre

Sep. 5 The black Lytta is now very common on the China Aster
1819 the petals of which it sadly destroys this plant & the St John wort
are the only plants on which I have ever seen them —

Sep 6 Caught a pepilio - clove brown with a yellow fegure of
8 and 2 black spot on each side of the fore wings they are
numerous (found only in the wood) during the month of August but hard
to catch and are caught with difficulty being very shy —

Phalaena Bombyx luna? This insect is

Larva full grown & when in motion about 3½ inches long is of a pale green inclined to yellow. the head & real feet are of a pale yellow brown — the edge of the supporters are fringed with short dark hair. It has six rows of small round orange or gilt knobs or tits from each of which proceed 2 or 3 light colored hairs; between the two lateral rows of tits is a row of red oval spots over the vent is a broad purple brown band — It feeds on the Hickory Juglans alba — at rest or when not feeding the body is usually drawn up and the head quite drawn in — this position it also assumes when sudden touched or even when breathed upon — They are subject to be destroyed by Ichneumon (small white) flies whose eggs are frequently found on the body the part immediately around the eggs becoming black spots — when these are numerous the insect becomes dull & stupid & often refuses food *

It has six vertical narrow pale yellow or whitish stripes each running from one tit to the tit in the lower row immediately above it —

* Here being hatched in the body live & are nourished by its juices & by the time the insect is in the pupa state they also spin their cocoon in its body & finally eat their way out of its dead body — the dead pupa

Sep 21 The large Carabi common or numerous this day on the gravelly land or field above Mill creek a few were found on plants but mostly in the dust Grasshoppers were preyed on some dead ones.

The white hairy caterpillar with black head & black ++ on the back were found to day some eating hazel. some on hickory & others on the oak —
the white hairs produce a very unpleasant pricking sensation on the face
a green larva with pink lateral band & spots on its back. was found under a chestnut —

617. Coccinella. this species is rare the shell
May 27 1870. are of a red or red brown color. with 4 dots and the side
the ground round the dots bin lighter color. thorax, with
black marking on it and a black dot on each side
abdomen black ———

618. pupa of. Potatoe Sphinx 3 to 3 1/4 inches long the
June 7 1870 rostrum is raised & curved detached from the body.

619 Pupa of — 1 1/2 to 1 3/4 inches long. —
June 7 1870 black. sphinx —

620 Cetonia or Melolontha — : — shells glossy & of a pale cane
yellow or cane color head thorax & ▽ of an dull yellow
color chatoyant or plaggy ish green — glossy. shells slightly
punctured and margined with a black line indented at the
shoulders and at the sides — thorax head & legs marked with
a black marginal line abdomen glossy purple
under part hairy. breast & thighs glossy green — legs
yellow brown
about the 1st of May — generaly found under the poplars
Inhabits Pekin & makes its appearance

621 Curculio ther on the pine already figured — see No.

622 Elater . long — pretty broad across the shells — this insect
June 11 1820 is of an hair brown color with 4 dark cloudy marks on the shells

June 11 1820

623 Asilus golden haired. 1 long eyes bister brown — legs black — beard, breast, under part of the thighs covered with white hairs — dark wings — thorax and back of the abdomen covered with silky orange colored or golden hairs.

624 Asilus green eyed. 1 long eyes green & occupy the whole head
June 11 beard foxy body, thighs anti and lower end of the shanks dark
1820. shanks for colored thorax abdomen & thighs greyish hairs

1 inch 4/10 in length.

625 Libellulae thorax abdomen & thighs terra sienna yellow.
June 11 upper part of the eyes yellow brown lower part or side of the eyes
1820 pale yellow green — abdomen with black brown lateral dashes —
root of the wings foxy yellowish red. sides of the thorax
pale yellow

626 Larvae of found on the Piony — black colored —
marked on the back with two broad red bands and a pale
June 11 1820 cane colored band on the side — the tits on the abdominal rings with whitish hairs —

The male ornalled has the thickest antennae in the Sphinges
July 12 The larva of Sphinx Lineata this day went into pupa
at the same time — the sphinx itself is numerous about the
Larkspur, Honeysuckle & Evening Primrose this latter appear to be a
Potatoes
partial peculiar favorite of the Sphinges particularly of the large Sphinx
with 8 yellow abdominal spots — All the Sphinges make their appearance shortly about
after sunset or in the dusk of the evening and are only seen hovering about
flowers for the space about 3/4 or one hour — they then retire to some
dark place nook where they remain for near 24 hours almost inanimate
so that their period of actual enjoyment is but short? when
do they copulate — their larvae are sluggish and generally
feed on low growing plants — sorrel parsley potato though often
peculiar to again are found on the potatoe, the tobacco, the vine —
No 1 or abdominal they have the larvae have generally a horn bent back on the last joint
ring — and the sphinx have all a very long subtile suckers with which they extract
the nectar of the flowers which are at other times rolled up in a spiral form
watch spring The habit of flying only in the dusk of the evening
distinguish them from the Sesia which fly only in the middle
of the day or full blaze of the sun — of these last there
appear to be two species viz the humming bird sphinx & the
wasp formed S. vespiformis — their larva & their food are
unknown to me —

Donovan

Sphinx No 1. Sphinx Lineata fig & described by various authors though I
believe none have given the larvae it is badly colored by
Donovan — the pupa is of a pale or mutatoe brown —
and the lands on the wing very visible just before the fly comes forth
thorax & broad —
general color grey form thick abroad abdomen bulky —
No 2 has 2 black spots on the thorax
Potatoe S. Batata (Solanum Tuberosum) this is the largest of the species
the fly and is common in the middle of July. an elegant (species describe it) describe larvae
4 or 5 Red dots on underside of abdomen the male? fly is 4 1/2 tip to tip. the female 5 1/2 tip to tip —
and more distinctly figured ornamented this both have something of a death
head figure on the thorax (one of the species not atropos) the pupa is
large and has a remarkably long proboscis stands or carried from the
breast. June 10 fly came out (sucker 3 inches long at least —

No 3. Sphinx — form rather near 4 inch tip to tip slender form — general color
perhaps Atlanticus ? light red brown — two brown lines on the thorax
laterally sides and over the eyes whitish and abdomen with alternate black & white
spots — two dark waves or clouds on the inferior wings
underside of abdomen white.

N°5

July 15 fly 2 1/2 tip to tip dark brownish grey abdomen with 12 round white dots on the back & wing speckled with grey white dots or spots. a white blaze in the inferior wing the outer edge of all the wing with a row of white spots underneath abdomen white with long white lateral spots on the side larvae unknown to me. forepart of feeler brown back pearl white — it has some ochre yellow specks on the lower part of the thorax and on the upper wings

N°6

July 12 fly 3 1/2 tip to tip — eyes broad formed black thorax and a white wave in the under wings (eyes near together or narrow space between them) 5 lateral dark spots on each side alternately with white or ash colored tufts or spots — larva unknown the wings are more slender & pointed than most species — this species usually comes I believe earlier (viz in June) than N°2 & some other —

N°7.

fly 3 1/4 tip to tip wings broader & less elongated than N°6 — superior wings brownish mottled with black spots lengthened thorax yellowish brown with two dark spots at the base a black stripe on each side at the root of wing and two ash colored stripes on the top of thorax — the inferior wings are black with a pale whitish or flesh colored wave from rib to inner edge. and another short whitish stripe near the root abdomen has alternate black and white spots

found a dozen on Sinton vine

July 15 Larva of sphinx Cyclops from the larva — near 3 inches long — color greyish brown real feet and end part of abdomen pale pink color with dark elongated spots forming two bands or stripes down the back — it has also a lateral row of long forked spots and a remarkable highly raised knob. glossy eye formed spot on the top of the anal joint in the tail of a horn — pink border with narrow black band on the false feet — food unknown to me

went into larva July 26

627

feed on the vine wild grape I believe (Sinton vine) some are of a greyish other more of a reddish or pink color & the tail or the back browner when handled they spitefully jerk themselves on one side then on the other making at the same time a peculiar noise

July 15 the Potatoe fly are now very numerous in the garden &c they are more or less in 4 or 5 years like the Spanish fly in Europe the Lytta do not come in number annually but at intervals of several years

1820
July 15 Larvae of Sphinx or when in motion 3 inches long 2 3/4 inches long yellow

of a purple brown color with delicate pale green
saddle large forward spots on the back of each annulation and large irregular
628 formed lateral spots of the same delicate green color — there is
no horn on the rear or last ring or joint but in lieu of
July 26 it a raised knob or glandy projecting eye like formed knob seated
went into in the center of a circular brown spot with a black form around it.
Pupa similar to 627.
supposed to feed on the wild grape vine — as it was found
with number 5. the larvae 627. or is the male or female of
the other? supposed other sex of 627.

near 4 1/2 inches tip to tip —
Nº4 Sphinx 4 1/3 inch long fly form pretty thick thorax
general color dove color with olive or olive green — on
July 28 each side of the thorax at the root of the upper wings
came into it has a large dark olive semicircular spot and another near
my room the abdomen there are several large olive spots and green
10 O'Clock P.M. waved lines on the superior wings. — and the inferior wings have a black spot near
attracted by the the abdomen and a dark cloud with several pink colored lines
light near the base — there is also a little flesh colored mark
on the upper wing — under part of upper wing yellowish brown

1820
July 21 Melolontha 8 punctata. male.
found Large 8 spot vine fretter? dusky red yellow brown female yellower and paler or lighter color & larger size.
number three male much more numerous than the female
day on they have 3 round black spots near the outer edge of each elytron
the vine and one on each side the outer edge of the thorax fringe black abdomen
thighs & legs greenish black — they are seen in the air for a long time
they deposit their eggs in decay leaves round decay heaps
in decay leaves — and come out in the beg state early in the
ensuing spring — in the day they are sometimes seen flying round
the wild vine on which they are found feeding. feed on the
underside of the leaf

629
1870
Aug 25
flies in the dusk of evening

length between the tips ~~tip to tip~~ 3 1/4 inches (42)
upper surface of superior wings grey brown clouded. under surface
with broad black & whitish bands across the wing: inferior wings
upper & under surface carmine red. (base of the inferior wing bordered with dusky white
edging) with a 2 broad black bands.. (——) body ash colored, long,
rather slender & tapering antennae (——) 8/10 long. (very slender)

630
Aug 24
1870
male & female in coitu.
beautifully marked!!

female 2 4/10 ~~tip to tip~~ chalky white upper &
under surface of superior & inferior wings — upper surface of
the superior wings has 4 or five black spots on the rib. with
several very minute black specks scattered over its surface. —
lower wing has 2 black spots on the upper & lower surface of
each inferior wing. on the back of the abdomen is a large broad
spot of a chromic yellow covering the space of 5 abdominal rings
it has on the abdomen 3 rows of ~~large~~ round black spots: viz
one of 6 down the back. and lateral row on each side of 6 also
and 5 rows of minute black spots on the under side of the abdomen
the fore part of the thighs is of an orange color.

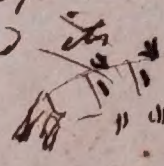
Male 2 3/10. tip to tip the thorax
and upper surface of the superior wings and the last abdominal
ring alone are white the breast, thigh, abdomen upper & under
surface of the inferior wings & the under surface of the superior
wings are orange or ochre yellow the spots are large &
more numerous than in the female

Note the spots vary considerably in specimens

The eggs when first laid are of a very pale yellow color. but in a
few days the change or become of a lead or bluish color

The white catterpillar with a black head and
and long lateral white hairs
of black (short) tufts on the back and numerous black
spots with 2 long black tufts before & 2 behind. has now
attained its full size —

Aug 24



supposed larva of 630